

14. (Once Amended). A therapeutic composition for use in treating human disc diseases comprising an implantation carrier in admixture with *in vitro* propagated human intervertebral annulus disc cells, said disc cells being obtained from a three-dimensional human intervertebral annulus disc cell culture prepared by a method comprising the steps of:

- a) providing a minced human intervertebral annulus disc tissue explant comprising human intervertebral disc cells;
- b) culturing said minced explant under conditions to propagate and form a monolayer of human intervertebral disc cells, wherein the human intervertebral disc cells of said monolayer can be isolated and further propagated upon passaging;
- c) isolating the human intervertebral disc cells from said monolayer;
- d) seeding the isolated cells in a hydrogel carrier material such that the isolated cells are dispersed and distributed in the carrier material forming a three-dimensional structure; and
- e) culturing said dispersed and distributed cells in the three-dimensional structure.

19. (Once amended). A method for treating an intervertebral disc disease in a human patient, comprising implanting *in vitro* propagated human intervertebral annulus disc cells into a target disc area needing treatment in said human patient.

25. (Once amended). The method of Claim 20, wherein said process further include *in vitro* propagated human intervertebral annulus disc cells are provided by a process including the steps of:

- a) providing said human intervertebral annulus disc tissue to obtain a minced explant comprising human intervertebral disc cells;
- b) culturing said minced explant under conditions to propagate and form a monolayer of human intervertebral disc cells, wherein the human intervertebral disc cells of said monolayer can be isolated and further propagated upon passaging;
- c) isolating said human intervertebral disc cells from said monolayer;